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XX. *An Account of Inoculation in Arabia, in a Letter from Dr. Patrick Ruffell, Physician, at Aleppo, to Alexander Ruffell, M. D. F. R. S. preceded by a Letter from Dr. Al. Ruffell, to the Earl of Morton. P. R. S.*

My Lord,

Read May 5 1768. **T**HE inclosed account of inoculation in the East, I have just received from my brother at Aleppo, and though nothing farther seems wanting in this country to remove prejudices against that practice, yet I thought its being made public might be of some use to other European nations, where such prejudices still prevail; and as a matter of curiosity, would not be unacceptable to the Royal Society. I have therefore taken the liberty to trouble your Lordship with it for that purpose.

Just before my leaving Aleppo, I did hear that it was practised amongst some of the Bedouins there, and went by the name of buying the small pox; but being then much engaged with other business, it quite escaped my memory, and indeed my information was so slight, that I did not think it right to mention it in my Natural History of Aleppo.

I shall

I shall only add, that my brother has been more prolix in the narrative than perhaps was necessary, had the facts come within his own knowledge; but so far as depended upon the intelligence of others, he thought it best to explain the foundation of his own belief.

I have the honour to be,

My Lord,

Your Lordship's

most obedient servant,

Walbrook, April 18,
1768.

Alexander Ruffell.

Dear

Dear Brother,

FROM the manner in which inoculation is mentioned in the Natural History of Aleppo, I suspect the circumstance of it's being a common practice among the Arabs must have escaped you. I myself was ignorant of it for several years after you left this country, and a mere accident brought it at last to my knowledge. About nine or ten years ago, while on a visit at a Turkish Harem, a lady happened to express much anxiety for an only child, who had not yet had the small pox; the distemper at that time being frequent in the city. None of the ladies in the company had ever heard of inoculation; so that, having once mentioned it, I found myself obliged to enter into a detail of the operation, and of the peculiar advantages attending it. Among the female servants in the chamber was an old Bedouin, who having heard me with great attention, assured the ladies, that my account was upon the whole a just one, only that I did not seem so well to understand the way of performing the operation, which she asserted should be done not with a lancet, but with a needle; she herself had received the disease in that manner, when a child; had in her time inoculated many; adding moreover, that the practice was well known to the Arabs, and that they termed it buying the small pox.

In consequence of this hint, I set about the procuring more particular information from the Arabs of this place; and the result of my enquiry was, that the practice of inoculation had been of long standing among them. They indeed did not pretend to assign any period to its origin; but those of seventy years old and upwards remembered to have heard it spoken of as a common custom of their ancestors, and made little doubt of its being of as ancient a date as the disease itself. Their manner of operating is, to make several punctures in some fleshy part, with a needle imbued in variolous matter, taken from a favourable kind of pock. They use no preparation of the body; and the disease communicated in this way being, as they aver, always slight, they give themselves little or no trouble about the child in the subsequent stages of the distemper.

This method of procuring the disease is termed, buying the small pox, on the following account. The child to be inoculated carries a few raisins, dates, sugar plumbs, or such like, and shewing them to the child from whom the matter is to be taken, asks how many pocks he will give in exchange. The bargain being made, they proceed to the operation. When the parties are too young to speak for themselves, the bargain is made by the mothers. This ceremony, which is still practised, points out a reason for the name given to inoculation by the Arabs; but, by what I could learn among the women, it is not regarded as indispensably necessary to the success of the operation, and is in fact often omitted.

The Bedouins at this place, who are employed in the service of the Harems, more rarely have recourse to inoculation, their children being often brought up in company with those of the Turks, by whom, as you justly observe, the practice is not admitted. But the Bedouins, less connected with the Turks, who dwell within the city; those who live in tents without the city walls, and the Arabs of the adjacent desert under the Emir, do commonly inoculate their children.

It being highly probable that a practice, which was so common in these parts, might be known also to the more Eastern Arabs, I applied for information to several Turkish merchants of Bagdat and Mouful, who occasionally reside a few months in the year at Aleppo. By those I was assured, that inoculation was not only common in both the cities first mentioned, but also at Bassora; and that at Mouful particularly, when the small pox first appeared in any district of the city, it was a custom sometimes to give notice by a public crier, in order that such as were inclined might take the opportunity to have their children inoculated.

I enquired at the same time of the Bagdat merchants, whether the Arabs, who dwell on the banks of the river between that city and Bassora, used the same method of propagating the small pox. They told me, they believed it to be common also among those Arabs; though (with an ingenuity not usual in this country) they owned they had never thought of enquiring about the matter, and might therefore perhaps be mistaken. But I afterwards had

an opportunity of being better informed by the Arabs, who come hither with the Eastern caravans ; from whose accounts it would appear, that inoculation has from time immemorial been a practice among the different Arab tribes with which they were conversant ; comprehending, besides those in the numerous encampments on the banks of the Euphrates, and the Tigris below Bagdat, other tribes in the vicinity of Bassora, and in the desert.

For these several years past, very few slaves have been brought from Georgia. From what I could collect among those already here, who remember any thing of their own country, inoculation was well known there : I have seen several old Georgian women, who had been inoculated, when children, in their fathers houses.

In Armenia, the Turkoman tribes, as well as the Armenian Christians, have practised inoculation since the memory of man ; but, like the Arabs, are able to give no account of its first introduction among them.

To what extent inoculation reaches in the Gourdeen mountains, I do not know with any certainty : it is practised by the Gourdeens in the Mountains of Bylan, and Kittis ; and, I have reason to think, extends much further.

At Damascus, and all along the coast of Syria and Palestine, inoculation has been long known. In the Castravan mountains it is adopted by the Drusi, as well as the Christians.

Whether the Arabs of the desert, to the South of Damascus, are acquainted with this manner of com-

municating the small pox, I have not hitherto been able to learn; but a native of Mecca, whom I had occasion to converse with this summer, assured me, that he himself had been inoculated in that city.

It has already been mentioned, that the Turks at Bagdat and Mousul make no scruple to inoculate their children. I have seen also some Turkish strangers here, who had been inoculated at Erzeroon. Hence it is probable that the Turks, in other parts of the Ottoman empire, do not merely, as fatalists, reject inoculation; but that other considerations, which have influence in countries where fatalists are ridiculed or anathematized, concur likewise in Turkey, to oppose the reception of a practice so beneficial to mankind. The child of a Bashaw here, was by my advice inoculated about eight years ago; but that is the only instance I have known among the Turks at Aleppo.

The Jews at this place absolutely reject inoculation; partly from scruples of a religious kind, and partly from the distrust of its success. At Bagdat, Bassora, and in Palestine, having acquired a more favourable opinion of an operation which they see so often performed with success, they have got the better of other scruples, and join in the practice with their neighbours.

I have several times conversed on this subject with the Mufti here, as also with some of the Rabbis; but the theology of both was too abstruse for me: their arguments, so far as I was able to comprehend them, seemed to be no less cogent against all chirurgical operations, which were attended with

any degree of danger to life, than against inoculation.

In the different countries above-mentioned, inoculation is performed nearly in the same manner. The Arabs affirmed, that the punctures might be made indifferently in any fleshy part: those I have had occasion to examine, have all (a very few excepted) had the mark between the thumb and the fore-finger.

Some of the Georgians had been inoculated in the same part, but most of them on the fore-arm. Of the Armenians some had been inoculated in both thighs; but the greatest part (like the Arabs) bore the marks upon the hand. Some of the Georgian women remembered, that rags of a red colour were chosen in preference for the binding up the arm, a circumstance of which I have been able to discover no trace among the Arabs.

Buying the small pox, is likewise the name universally applied to the method of procuring the disease. There are, it is true, other terms made use of both in the Arabic and Turkish Languages; and at this place, it is principally known to the Christians by the name of inoculation.

From the sameness of the name, as well as from the little diversity observable in the manner of performing the operation, it is probable the practice of inoculation in these countries was originally derived from the same source: and that it is of considerable antiquity, can hardly be doubted, if we consider the large extent of country over which it is found to have spread, and the obstacles it must have met

with in a progress through various nations, of which some are separated by polity as well as religion, while others, peculiarly tenacious of their own customs, are little disposed to admit those of strangers.

That no mention is made of inoculation by Rhazes, Avicenna, or any other of the ancient Arabian medical writers known in Europe, is, I believe, in general supposed; and I am assured by the native physicians here, that nothing is to be found regarding it, in any of a more modern date. Some learned Turkish friends here, some time ago were prevailed on at my request to make enquiry, but have not hitherto been able to discover any thing concerning inoculation; although they searched not only the medical writers, but also the historians, and some of the poets.

It appears from accounts communicated to the Royal Society, in the year 1723, by Doctor Williams and Mr. Wright, that inoculation had been known in certain parts of Wales so far back as the last century; and it is remarkable, that it there bore the same name, by which it is most generally known to the Arabs. I think it has also been discovered to be an ancient practice among the vulgar in different parts of the continent.

If inoculation was really known so long ago in Europe, and the accounts of it till within these fifty or sixty years are found to be merely traditional, the silence of the Arabian writers, on a practice which probably was never adopted by their physicians, is the less to be wondered at. What may perhaps appear more strange, is, that after the year 1720, though the

the curiosity of the public has, at different times, been excited by the controversies relating to inoculation, the state of that practice in Syria, where there were so many European settlements, should have remained unknown both in England and in France, which probably was the case, as the advocates for inoculation have made no reference to it.

Whether before the account transmitted by Pylarini to the Royal Society, inoculation had not been mentioned by any of the travellers who had visited these countries, I do not presume to determine. In the books I have had occasion to peruse, there is nothing to be found on the subject. Among the travellers the most likely to have mentioned it was Rauwolf: yet, however rational it may be to think that a practice of such a kind, had it then prevailed, could hardly have escaped the notice of so diligent an observer, it would be rash to infer from his silence that it was not known to the Arabs in the sixteenth century. The justly celebrated French botanist is equally silent, though in the beginning of the present century he visited several places where inoculation was undoubtedly at that time both known and practised.

Having related in what manner I came to learn inoculation was known to the Arabs, I can arrogate no merit in the discovery; nor would I be thought to insinuate any reflection on the accuracy of the indefatigable M. Tournefort, to whose labours the curious stand so much indebted. Customs the most common, in distant countries, are often of all others
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the least apt to attract the observation of travellers, who, engaged in other pursuit, must be indebted to accident for the knowledge of such things, as the natives seldom talk of, from the belief that they are known to all the world. This consideration may, in some measure, account for inoculation having been over-looked by those who have transiently passed through these countries; and is all we can offer as an apology, for the having remained so long unacquainted with a fact in medical history, in a situation where we both had so many opportunities of information. I am,

Dear brother,

Most affectionately yours,

Aleppo, Nov, 26,
1767.

P. Ruffel.